

# Work Order ID 51509

August 25, 2009 1:34:17 PM

Item ID: D205-634-041  
Revision ID: D  
Item Name: Replacement Skidtube

Start Date: 8/24/09 Start Qty: 1.00  
Required Date: 8/24/09 Req'd Qty: 1.00

Reference:

Approvals: Process Plan: *RP MW*  
QC:

Sequence ID/  
Work Center ID Operation  
Description

Draw Nbr	Revision Nbr
D2580	Rev D

100



DC

Document Control

DOCUMENT CONTROL

Memo

Photocopy D205-634 bluefile & type labels per PPP D205-634-041 CHG002

0.00

0.00

110



CNC Bend 1

CNC Delta 100 Bender

BENDING MACHINE - SKIDTUBES

Memo

1-Bend as per program D2580.C on CNC Bender and Folio FT009

2-Cut tubes as per Dwg. D2580

0.00

0.00

Accept



Setup Start



Stop



Cust Item ID:

Customer:

Date: 09-08-25 Tooling:

Date:

Date: SPC (Y/N):

Date:

Run Start



Stop



Set Up/  
Run Hours

Draw  
Number

Draw  
Rev.

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

*PL 09-10-22*

*RP*  
*9-9-29*

*51509*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng. Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all entries

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Setup Start

Stop

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Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Draw  
Number

Draw  
Rev.

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

120

0.00

Skidtubes

Memo

0.00

Skidtubes

1- Deburr ends

2- C'sink holes as per dwg without cutting fluid

3- Prepare tube for welding, remove alodine as required.

4- Scribe batch number insied aft end of tube.

130

QC5- Inspect part completeness to step on W/O

0.00

QC

Memo

0.00

Quality Control



TK

Q

MB 09-10-01

2) 8 09/10/01

70

6

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng/ Prod Mgr	Approval QC Inspector

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Approvals: Process Plan:  
QC:

Date: Tooling: Date:  
Date: SPC (Y/N): Date:

Run Start  
Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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140



Skidtubes

Skidtubes

Memo

1-Weld step D2576 as per Dwg. D2580 and QSI 004  
A/R [ ] Aluminum Rod

mill 999

BE 09/10/09

2-Prep per QSI 005 and weld crossbolt spacers D2579 as per Dwg. D2580, QSI 004.  
For D2579 spacers, weld one side, pass 3/8" drill, weld other side, pass 3/8" drill

A/R [ ] Aluminum Rod

mill 999

BE 09/10/09

3-Grind welds as per Dwg D2580 Grind flush ridge made from bending

a.m. 09-10-10 ①

4-Drill holes for wearplates using DT 8217 & DT8937 Open holes to 19/64", adjust stopper not to hit web. Deburr

a.m. 09-10-10 ①

5-Counterbore crossbolt spacers to 7/16" ID x 1.0" deep as per Dwg D2580. Deburr holes

a.m. 09-10-10 ①

6-Drill pilot holes for aft cap using DT 8215 Open holes to 0.208". Deburr

a.m. 09-10-10 ①

7-Drill pilot holes for Tow ring using DT8091, open to .640" and Deburr

a.m. 09-10-10 ①

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Stop

Cust Item ID:

Customer:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

Stop

QC:

Date:

SPC (Y/N):

Date:

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run HoursDraw  
NumberDraw  
Rev.Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

150

QC10- Inspect visual per QSI004- ground welds

0.00

27.5 02/10/13

QC

Memo

0.00

Quality Control

160

QC5- Inspect part completeness to step on W/O

0.00

27.5 02/10/13

QC

Memo

0.00

Quality Control

170

Pressure Wash per QSI005.4.3

0.00

27.5 02/10/13

HandFinish

Memo

0.00

Hand Finishing

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Reference:

Approvals: Process Plan:  
QC:

Date: Tooling: Date:  
Date: SPC (Y/N): Date:

Run Start

Stop

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Draw  
Number

Draw  
Rev.

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

180



Powdercoat

Powder Coating

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

0.00

Memo

START TIME: 10:30am  
OVEN TEMPERATURE: 320°F  
FINISH TIME: 11:00am

190



QC

Quality Control

QC3- Inspect Part Finish

0.00

0.00

Memo

Handwritten notes: 2112260, 09/10/13, (X1), 09-10-14, and other markings.

W/O:		WORK ORDER CHANGES					
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Customer:

Reference:

Approvals: Process Plan:  
QC:

Date: Tooling: Date:  
Date: SPC (Y/N): Date:

Run Start

Stop

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Draw  
Number

Draw  
Rev.

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

200

0.00



HandFinish

Memo

0.00

Hand Finishing

1-Install inserts & wearplates & Gaskets as per Dwg. D2580. Use a drop of Sikaflex on insert holes before installing wearplates  
A/R ☐ ☐ ☐ Sikaflex-291 M 112391  
Sikaflex expire date: 10/20

2-Coat D2594-3 O' rings with Petroleum Jelly and install on D2594-1 plugs as per Dwg D2580

3-Inspect for foreign object per QSI 024

4-Install 2855 Aft Cap as per Dwg D2580 and seal Fwd Step & Aft Cap with Sikaflex. Clean excess adhesive  
A/R ☐ ☐ ☐ Sikaflex-291 M 112391  
Sikaflex expire date: 10/20

5-Wing Walk as per Dwg D2580 and QSI 005 4.4  
Batch: M 112391

OK 02-10-15 ①

W/O:		WORK ORDER CHANGES					
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Required Date: 8/24/09 Req'd Qty: 1.00

Reference:

Cust Item ID:

Customer:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run HoursDraw  
NumberDraw  
Rev.Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

210



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

2) 5 okols

Memo

0.00

Inspect Aft Cap, Fwd Step and Wing Walk of work to Current Step Inspect for Foreign objects per QSI 024



220



Packaging

Packaging

Packaging

0.00

Memo

0.00

Identify and pack for shipping as per PPPD205-634-041

Location:  
PPP Rev: I

9/10/00 QD SP

230



QC

Quality Control

QC21- Final Inspection - Work Order Release

0.00

Memo

0.00

09/10/23 HJ

MF

09-10-23

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# Picklist Print

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Page 1

Work Order ID: 51509

Parent Item: D205-634-041RevD

Parent Item Name: Replacement Skidtube

Comments:

Start Date: 8/24/09

Required Date: 8/24/09

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D2580-1RevD		Manufactured	No			110	Each	14.0000	1.0000			



205 Skidtube bent detail

B51774  
D9-9-29

Warehouse Loc Qty Loc Code

Location

Main Warehouse

LG

13

50757

3

50761

6

50976

2

50977

2

Main Warehouse

ST

1

50758

1

D2576-3RevG

Manufactured No

140

Each

141.0000

1.0000



Step (maching detail)

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

141

43504

40

46661

101

1 86 09/20/09

W/O:		WORK ORDER CHANGES					
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Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Comments:

Start Date: 8/24/09

Required Date: 8/24/09

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Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D2579RevE		Manufactured	No			140	Each	464.0000	20.0000			



Crossbolt Spacer

B-51525  
X 20PCS  
MB 09-10-01

Warehouse	Loc Qty	Loc Code
<u>Location</u>		
Main Warehouse		
ST	464	
43988	4	
46434	4	
46956	2	
47797	9	
48272	22	
51314	100	
51315	323	

D2855RevA

Manufactured No

200

Each

29.0000

1.0000



Cap

Warehouse	Loc Qty	Loc Code
<u>Location</u>		
Main Warehouse		
FP	-1	
50513	-1	
Main Warehouse		
FP6	31	
50513	31	
Main Warehouse		
ST	-1	
50513	-1	

1 BR 09-10-15.

W/O:		WORK ORDER CHANGES					
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Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
AN3-5A		Purchased	No			200	Each	2,515.000	2.0000			



Bolt

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
ST	2515	
100188	212	
105057 ✓	2245	
15205	58	

2 BR 09-10-15

AN960JD10L



Washer

Purchased

No

200

Each

6,679.000

2.0000

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
FP	-2	
109632	-2	
Main Warehouse		
ST	6681	
101291	16	
104885	153	
105793	236	
109632 ✓	1276	
110985	5000	

2 BR 09-10-15

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Shop Packet Print

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Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	--------------------------	---------------	----------------	--------

ALS7-1032-130

Purchased

No

200

Each

3,628.000

50.0000



Insert

## Warehouse

## Loc Qty

## Loc Code

### Location

Main Warehouse

ST

112772

3628

105855

16

108606

52

111529

1560

111779

2000

50 BR 09-10-15

AN3C4A

Purchased

No

200

Each

632.0000

50.0000



BOLT

## Warehouse

## Loc Qty

## Loc Code

### Location

Main Warehouse

FP

112724

-50

112314

-50

Main Warehouse

ST

682

112082

30

112314

652

50 BR 09-10-15

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AN960C10L		Purchased	No			200	Each	2,946.000	50.0000			
												
washer												

Warehouse Loc Qty Loc Code  
Location

OFFSHORE 112612  
FG 103585 100  
Main Warehouse  
FP 112116 -50  
Main Warehouse  
ST 112116 2896

50 BR 09-10-15

D3566-13RevC		Manufactured	No			200	Each	20.0000	1.0000			
												
Gasket												

Warehouse Loc Qty Loc Code  
Location

Main Warehouse  
FP 51606 -1  
48166 -1  
Main Warehouse  
ST 45717 1  
46889 1  
48166 3  
50265 16

1 PR 09-10-15

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D3566-5RevC		Manufactured	No			200	Each	17.0000	1.0000			
												
Gasket												

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
FP19 <i>51669</i>	-1	
51260	-1	
Main Warehouse		
ST	18	
36113	1	
46186	1	
47318	1	
48167	1	
51260	14	

*1 BR 09-10-15*

D3566-1RevC		Manufactured	No			200	Each	27.0000	2.0000			
												
Gasket												

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
FP <i>52612</i>	-2	
51259	-2	
Main Warehouse		
ST	29	
46349	1	
47434	2	
51218	1	
51259	25	

*2 BR 09-10-15*

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Shop Packet Print

Page 6

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng/ Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

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Page 7

Work Order ID: 51509

Parent Item: D205-634-041RevD

Parent Item Name: Replacement Skidtube

Comments:

Start Date: 8/24/09

Required Date: 8/24/09

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D3564-11RevD		Manufactured	No			200	Each	29.0000	1.0000			



Wearshoe

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
FP	22	
51256	22	
Main Warehouse		
FP19	-1	
50112	-1	
Main Warehouse		
ST	8	
45823	1	
50112	7	

51594

1 Bill 09-10-15.

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Page 7

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng'/ Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

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Page 8

Work Order ID: 51509

Parent Item: D205-634-041RevD

Parent Item Name: Replacement Skidtube

Comments:

Start Date: 8/24/09

Required Date: 8/24/09

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D3564-13RevD		Manufactured	No			200	Each	30.0000	1.0000			



Wearshoe

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
FP17 32059	17	
50270	17	
Main Warehouse		
FP19	-1	
50270	-1	
Main Warehouse		
ST	14	
45409	3	
46495	10	
47867	1	

1 BK 09-10-15

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Page 8

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

August 25, 2009 1:34:16 PM

Page 9

Work Order ID: 51509

Parent Item: D205-634-041RevD

Parent Item Name: Replacement Skidtube

Comments:

Start Date: 8/24/09

Required Date: 8/24/09

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	--------------------------	---------------	----------------	--------

D3564-9RevD

Manufactured

No

200

Each

20.0000

1.0000



Wearshoe

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
FP19 51675	-2	
51258	-2	
Main Warehouse		
ST	22	
44659	1	
45825	1	
51258	20	

1 BL 09-10-15

D3564-5RevD

Manufactured

No

200

Each

17.0000

1.0000



Wearshoe

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
OFFSHORE		
FG 51655	2	
34806	2	
Main Warehouse		
FP19	15	
48555	1	
51257	14	

1 BL 09-10-15

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Page 9

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Picklist Print

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Page 10

Work Order ID: 51509

Parent Item: D205-634-041RevD

Parent Item Name: Replacement Skidtube

Comments:

Start Date: 8/24/09

Required Date: 8/24/09

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	--------------------------	---------------	----------------	--------

D2594-3RevC

Manufactured

No

200

Each

542.0000

16.0000



O-Ring, 205 Skidtube

## Warehouse

## Loc Qty

## Loc Code

### Location

Main Warehouse

ST 51613

542

27168

44

29908

498

16 BK 09-10-15

D2594-1RevC

Manufactured

No

200

Each

348.0000

16.0000



Plug, 205 Skidtube

## Warehouse

## Loc Qty

## Loc Code

### Location

Main Warehouse

ST 51757

348

42221

16

42807

92

43884

3

46435

2

47251

235

16 BK 09-10-15

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Page 10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**DART**

DESIGN <i>[Signature]</i>	DRAWN BY <i>[Signature]</i>	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D2580	REV. D SHEET 1 OF 3
DATE 07.02.27		TITLE 205 SKIDTUBE ASSEMBLY	SCALE NTS
A	96.09.16	NEW ISSUE	
B	96.12.02	AS MANUFACTURED	
C	98.08.26	REDRAWN, INCLUDED DEO 9094/9097	
D	07.02.27	CHANGE TO SS WEARPLATES AND GASKETS, INCLUDE DEO 9124/9183	

**RELEASED**  
07-06-28 *[Signature]*

QTY -041	QTY -045	Part Number	Description
X		D2580-041	SKIDTUBE ASSEMBLY
	X	D2580-045	SKIDTUBE ASSEMBLY
1	1	D2500-1-190	EXTRUSION
1	1	D2576-3	STEP
20	24	D2579	CROSS BOLT SPACER
16	16	D2594-1	PLUG
16	16	D2594-3	O-RING
1	1	D2596	205 WEB
1	1	D2855	AFT CAP
1	1	D3564-5	WEARSHOE
1	1	D3564-9	WEARSHOE
1	1	D3564-11	WEARSHOE
1	1	D3564-13	WEARSHOE
2	2	D3566-1	GASKET
1	1	D3566-5	GASKET
1	1	D3566-13	GASKET
50	50	ALS7-1032-130 or AKS7-1032-130 or AKS4-1032-130 or AELS-1032-130	INSERT
50	50	AN3C4A	BOLT
2	2	AN3-5A	BOLT
50	50	AN960C10L	WASHER
2	2	AN960JD10L	WASHER

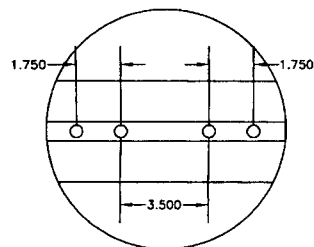
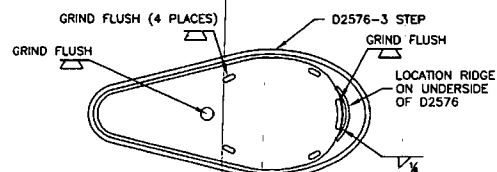
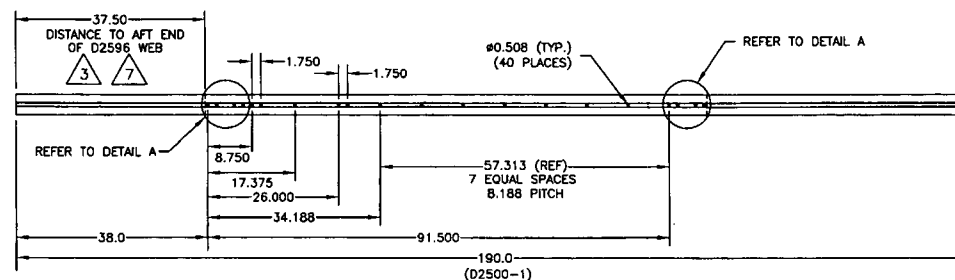
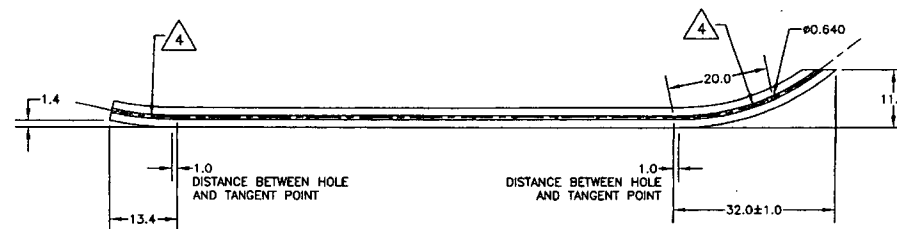
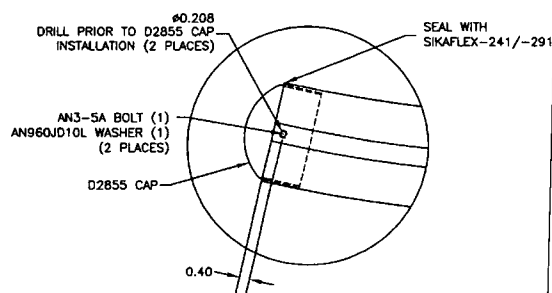
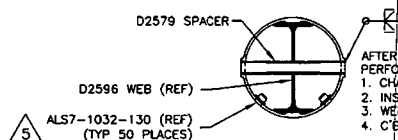
**GENERAL NOTES:**

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 2) ALL DIMENSIONS ARE IN INCHES
- 3) INSERT D2596 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241 ADHESIVE PER DART QSI 015 BEFORE BENDING. ENSURE HOLES LINE-UP.
- 4) BEND AS A SMOOTH RADIUS STARTING WITH A MAXIMUM CENTERLINE RADIUS OF 60 AND ENDING WITH A MINIMUM RADIUS OF 30. A MAXIMUM REDUCTION OF 0.200 IN DIAMETER IS ALLOWABLE IN THE BENT PORTION OF THE TUBE.
- 5) USE DART DRILL TEMPLATE TD2577-205 TO LOCATE AND DRILL  $\varnothing 0.297$  HOLES FOR WEARSHOE INSERTS. INSTALL ALS7-1032-130 PER SECTION D-D (50 PLACES) AFTER FINISH. INSTALL AN3C4A BOLTS AND AN960C10L WASHERS WITH SIKAFLEX-241/-291.
- 6) WELDING TO BE DONE PER DART QSI 004.
- 7) FINISH:  
SEE NOTES ON  
PAGE 2 FOR D2580-041 AND  
PAGE 3 FOR D2580-045
- 8) INSERT D2594-1 PLUG C/W D2594-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE) AFTER FINISH (16 PLACES).

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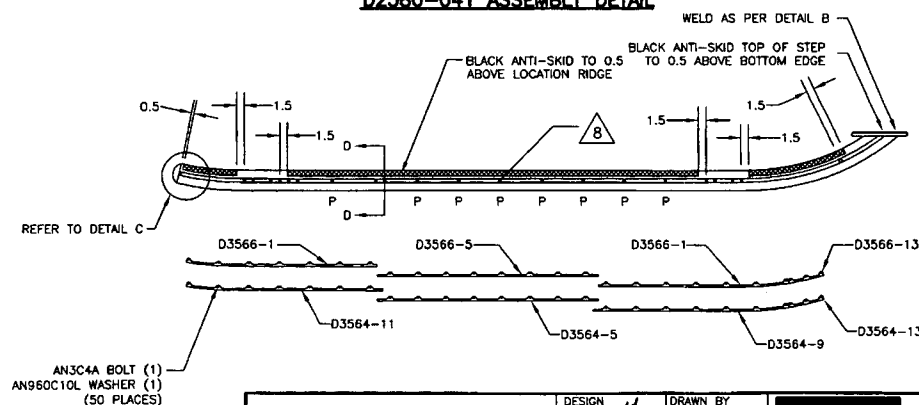
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51509

**DETAIL A**  
SCALE 5:24**DETAIL B**  
SCALE 5:24**D2580-1 DRILLING DETAIL****D2580-1 BENDING AND CUTTING DETAIL****DETAIL C**  
SCALE 5:24**SECTION D-D**  
SCALE 5:24

AFTER DRILLING AND BENDING ASSEMBLY PERFORM THE FOLLOWING FOR #0.508 HOLES ONLY:

1. CHAMFER HOLE 0.050 X 45°
2. INSERT D2579 SPACER (20 PLACES)
3. WELD INTO PLACE AND GRIND FLUSH
4. C-BORE D2579 SPACER TO #0.437 X 1.00 DEEP

**D2580-041 ASSEMBLY DETAIL****D2580-041 NOTES**

- i) FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB  
POWDER COAT ASSEMBLY GLOSS WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3  
BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4

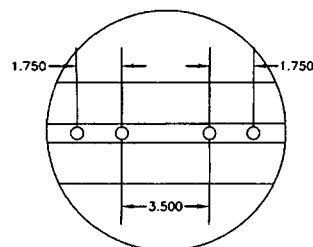
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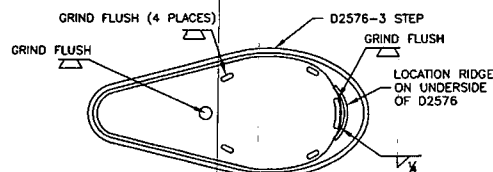
DESIGN	<i>[Signature]</i>	DRAWN BY	<i>[Signature]</i>	<b>DART</b>	DART AEROSPACE LTD. HARRISBURG, ONTARIO, CANADA
CHECKED	<i>[Signature]</i>	APPROVED	<i>[Signature]</i>	DRAWING NO.	REV. 0
DATE	07.02.27	TITLE	205 SKIDTUBE ASSEMBLY	SHEET 2 OF 3	SCALE
					1:24

51509

**DETAIL E**  
SCALE 5:24

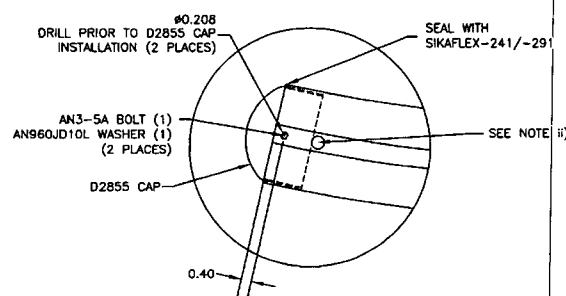


**DETAIL F**  
SCALE 5:24

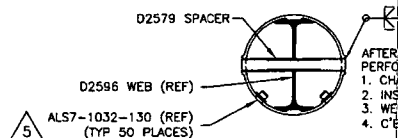


**RELEASED**  
07.06.28

**DETAIL G**  
SCALE 5:24

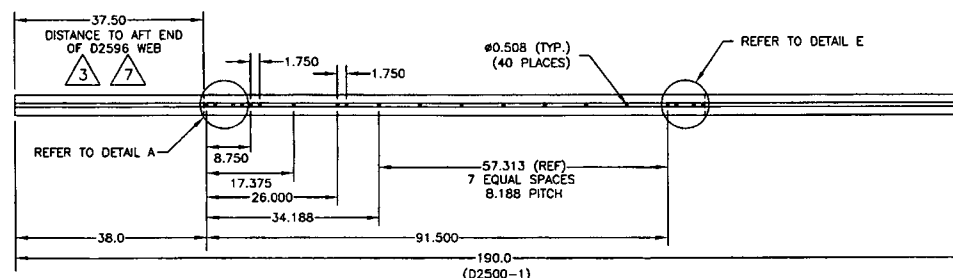


**SECTION H-H**  
SCALE 5:24

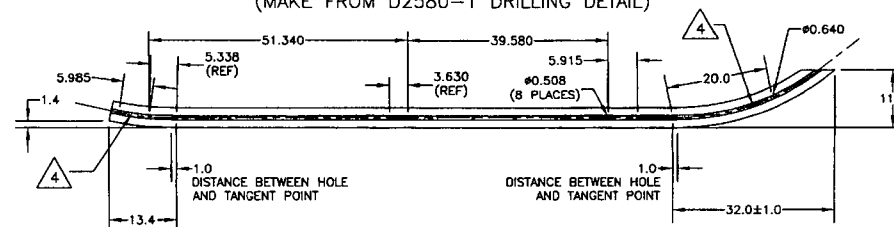


AFTER DRILLING AND BENDING ASSEMBLY PERFORM THE FOLLOWING FOR Ø0.508 HOLES ONLY:  
1. CHAMFER HOLE 0.050 X 45°  
2. INSERT D2579 SPACER (20 PLACES)  
3. WELD INTO PLACE AND GRIND FLUSH  
4. C'BORE D2579 SPACER TO Ø0.437 X 1.00 DEEP

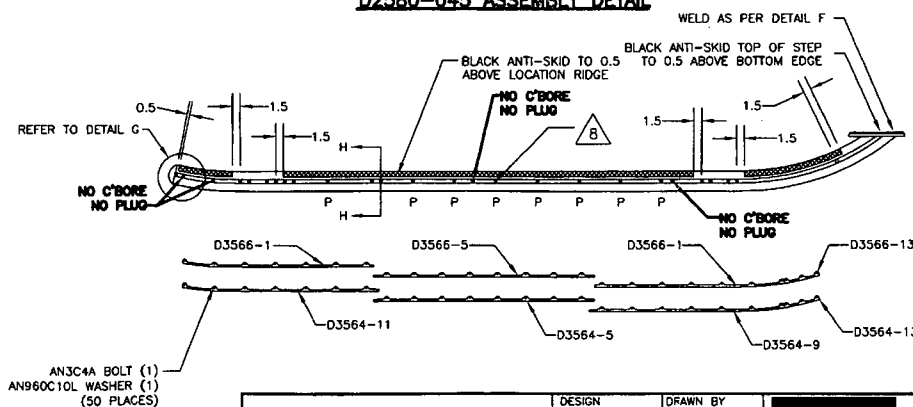
**D2580-1 DRILLING DETAIL**



**D2580-5 BENDING AND CUTTING DETAIL**  
(MAKE FROM D2580-1 DRILLING DETAIL)



**D2580-045 ASSEMBLY DETAIL**



**D2580-045 NOTES**

- i) FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB  
POWDER COAT ENTIRE ASSEMBLY GREEN (REF. 4.3.5.8) PER DART QSI 005 4.3  
BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4
- ii) IT IS ACCEPTABLE TO GRIND A RELIEF IN THE D2855 AFT CAP TO PREVENT INTERFERENCE WITH THE SPACER AT THIS LOCATION

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DESIGN RH	DRAWN BY RH	<b>DART</b>	DART AEROSPACE LTD. HAWKESBURY, ONTARIO, CANADA
CHECKED H	APPROVED H	DRAWING NO. D2580	REV. 0
DATE 07.02.27	TITLE 205 SKIDTUBE ASSEMBLY	SHEET 3 OF 3	SCALE 1:24

NO. 212

AWS D17.1.2001  
QUALIFICATION TEST RECORD

Name: Berclay Elliott  
Job number: 51505  
Part number: D205-634-041  
Description: 205 skid tube  
Welding Process: Tig[☒] Mig[ ]  
Base material: Aluminium  
Current: AC[ ] DC[ ]

**TEST REQUIREMENTS AND RESULTS**

Visual: pass[☒] fail[ ]  
Penetration: pass[☒] fail[ ]

**UNACCEPTABLE**

Cracks: pass[☒] fail[ ]  
Undercut: pass[☒] fail[ ]  
Pin holes: pass[☒] fail[ ]  
Overlap (cold lap): pass[☒] fail[ ]  
Porosity (surface): pass[☒] fail[ ]  
Coloration: pass[☒] fail[ ]

Qualifier Pat. D. [Signature] Date of Test Coupon 09.10.09  
Welder Berclay Elliott Date of Test Coupon 09-10-09

The above named individual is qualified in accordance with AWS D17.1.2001 to weld